

CLAIMS

What is claimed is:

- 5 1. A polyphase device comprising:
 a first transistor having a first collector, a first base and a first
 emitter, the first base adapted to receive a positive portion of an input signal;
 a second transistor having a second collector, a second base and
 a second emitter, the second base adapted to receive a negative portion of the
10 input signal, the first transistor and the second transistor adapted to drive the
 R-C polyphase network;
 an R-C polyphase network having a first input coupled to the
 first collector and a second input coupled to the second collector;
 the R-C polyphase network including an inductor;
15 the R-C polyphase network having first output and a second
 output, the first output and the second output offset in phase; and
 the inductor adapted to provide bandpass filtering of the first
 output and the second output.
- 20 2. The device of claim 1 wherein the inductor is coupled in
 parallel to an input of the R-C polyphase network.
3. The device of claim 1 wherein the inductor is in resonance
 with a capacitive reactance of the R-C polyphase network.
- 25 4. The device of claim 1 wherein the first output and the second
 output are offset in phase by approximately 90 degrees.
5. The device of claim 1 wherein the inductor is adapted to
30 reduce unwanted harmonics and spurious content in the first output and the

second output.

6. The device of claim 1 wherein the inductor comprises:
a first inductor coupled in parallel with the first input of the R-C
5 polyphase network; and
a second inductor coupled in parallel with the second input of
the R-C polyphase network.

7. The device of claim 1 wherein the first output and the second
10 output are amplified relative to the input signal.

8. The device of claim 1 wherein the R-C polyphase network
comprises a two-stage R-C polyphase network.

9. A polyphase device comprising:
a transistor having a collector, a base and an emitter;
an R-C polyphase network having an input coupled to the
collector, the transistor adapted to drive the R-C polyphase network; and
the R-C polyphase network including an inductor adapted to
20 provide bandpass filtering of an output of the R-C polyphase network.

10. The device of claim 9 wherein the inductor is coupled in
parallel to the input of the R-C polyphase network.

11. The device of claim 9 wherein the inductor is in resonance
25 with a capacitive reactance of the R-C polyphase network.

12. The device of claim 9 wherein the inductor is adapted to
reduce unwanted harmonics and spurious content in the output.

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13. The device of claim 9 wherein the output is amplified relative to an input signal coupled to the base and driving the R-C polyphase network.

5 14. A method of generating phase offset signals comprising the steps of:

 inputting a positive portion of an input signal into a first base of a first transistor;

 inputting a negative portion of the input signal into a second
10 base of a second transistor;

 biasing the first transistor and the second transistor to conduct current;

 driving an R-C polyphase network having a first input coupled to a first collector of the first transistor and a second input coupled to a second
15 collector of a second transistor, wherein the polyphase network includes an inductor; and

 outputting a first output and a second output, the first output and the second output offset in phase, the inductor causing a bandpass filtering of the first output and the second output.

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 15. The method of claim 14 wherein the inductor is coupled in parallel to an input of the R-C polyphase network.

 16. The method of claim 15 wherein the inductor is in resonance
25 with a capacitive reactance of the R-C polyphase network.

 17. The method of claim 14 wherein the outputting step comprises outputting the first output and the second output offset in phase by approximately 90 degrees.

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18. The method of claim 14 further comprising reducing unwanted harmonics and spurious content in the first output and the second output.

5 19. The method of claim 14 wherein the inductor comprises:
a first inductor coupled in parallel with the first input of the R-C polyphase network; and
a second inductor coupled in parallel with the second input of the R-C polyphase network.

10 20. The method of claim 14 further comprising amplifying the first output and the second output relative to the input signal.